



UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

[Handwritten signature]

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/437,948 11/10/99 ARFSTEN

N 275-305

EXAMINER

000570 IM22/0716
AKIN, GUMP, STRAUSS, HAUER & FELD, L.L.P.
ONE COMMERCE SQUARE
2005 MARKET STREET, SUITE 2200
PHILADELPHIA PA 19103

MCNEIL, J	
ART UNIT	PAPER NUMBER

1775
DATE MAILED:

10

07/16/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/437,948

Applicant(s)

Artsten et al

Examiner
Jennifer McNell

Art Unit
1775



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Apr 16, 2001

2a) ☐ This action is FINAL.

2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-3, 11, 12, and 19-21 is/are pending in the application

4a) Of the above, claim(s) _____ is/are withdrawn from consideration

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1, 2, 11, 12, and 19 is/are rejected.

7) ☒ Claim(s) 3, 20, and 21 is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirements

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 8

20) ☐ Other:

Art Unit: 1775

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1, and 2 are rejected under 35 U.S.C. 102(a) as being anticipated by Heuer et al (EP 0942316A2). Heuer et al teach an ion storage layer of vanadium or niobium oxide produced by a sol-gel process and may be used for vehicle or building glazing, display elements, optics, mirrors, and electromagnetic interference screening. A film of niobium oxide would inherently possess the claimed index of refraction.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kirlin et al (US 5,677,002). Kirlin et al teach niobium and tantalum compounds useful as source reagents or precursors in CVD processes. Kirlin et al also disclose that refractory materials have been identified as having many unique properties and that there are numerous applications for niobium oxide materials. And further, methods for forming the thin films, coatings, or layers of niobium

Art Unit: 1775

oxide materials include sputtering, and other PVD methods, CVD, and sol-gel processing. The latter two methods are particularly useful in that they can coat surfaces with complex geometries (col. 1, lines 15-20; col. 2, lines 16-22).

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1, 2, 12, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Eisenhammer et al (US 5,912,045). Eisenhammer et al teach a process for producing selective absorbers wherein dielectrics such as niobium oxide may be converted into an initial solution. The dielectric matrix has conductive particles therein and the resulting dispersion or gel is applied to a reflector substrate. A selective properties of the dispersion can be achieved with different cermet layer thicknesses. A high reflection in the infrared spectral range serves for suppressing radiation loss due to thermal radiation (col. 2, lines 39-46; col 5, lines 5-10, and claims).

5. Claims 1, 2, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Balkus et al (US 6,120,891). Balkus et al teach transition metal oxide thin films which may be deposited onto a glass substrate by a sol-gel process. The sol gel can be deposited on a silicon or MYLAR substrate (col. 4, lines 58-67; col. 7, lines 42-50).

Art Unit: 1775

Allowable Subject Matter

6. Claims 3, 20, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach or suggest a coated substrate having a thin film optical coating wherein the coating has a layer comprising a sol-gel derived oxide system, the sol-gel comprising niobium oxide, and a second oxide selected from silicon dioxide or aluminum oxide, wherein the second oxide is present in the layer in a mole fraction of up to about 0.55 based on the total moles of niobium oxide and the second oxide in the layer.

Response to Arguments

8. Applicant's arguments with respect to claims 1,2, 11, 12, and 19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer McNeil whose telephone number is (703) 305-0553. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

Art Unit: 1775

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones, can be reached at (703) 308-3822.

When filing a fax in Group 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communications with the PTO that are not for entry into the file of this application. This will expedite processing of your papers. The fax number for this Group are (703) 305-3599 for "Official" faxes and (703) 3055436 for "Unofficial" faxes.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0661.


Jennifer McNeil
Patent Examiner
AU 1775


DEBORAH JONES
SUPERVISORY PATENT EXAMINER